Claims

1. Nucleic acid which encodes the heavy chain of a human antibody, or a functional derivative or a fragment thereof, and comprises a CDR3 region, selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
V L P F D P I S M D V, (SEQ ID NO:31) ~~(I)~~

(b) a nucleotide sequence which encodes the amino acid sequence:
A L G S W G G W D H Y M D V, (SEQ ID NO:32) ~~(II)~~

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b), and

(d) a nucleotide sequence which encodes an amino acid sequence having an equivalent ability to bind to GPIIb/IIIa.

2. Nucleic acid according to Claim 1, which furthermore comprises a CDR1 region selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
G Y S W R, (SEQ ID NO:33) ~~(III)~~

(b) a nucleotide sequence which encodes the amino acid sequence:
S Y A M H, (SEQ ID NO:34) ~~(IV)~~
and

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b).

3. Nucleic acid according to either Claim 1 or 2, which furthermore comprises a CDR2 region, selected from

(a) a nucleotide sequence which encodes the amino acid sequence:
D I S Y S G S T K Y K P S L R S, (SEQ ID NO: 35) ~~(V)~~

(b) a nucleotide sequence which encodes the amino acid sequence:
V I S Y D G S N K Y Y A D S V K G, (SEQ ID NO: 36) ~~(VI)~~
and

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b).

4. Nucleic acid which encodes the light chain of a human antibody, or a functional derivative or a fragment thereof, and comprises a CDR 3 region, selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
A T W D D G L N G P V, (SEQ ID NO: 37) ~~(VII)~~

(b) a nucleotide sequence which encodes the amino acid sequence:
A A W D D S L N G W V, (SEQ ID NO: 38) ~~(VIII)~~

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b), and

(d) a nucleotide sequence which encodes an amino acid sequence having an equivalent ability to bind to GPIIb/IIIa.

5. Nucleic acid according to Claim 4, which furthermore comprises a CDR1 region selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
S G S S S N I R S N P V S, (SEQ ID NO: 39) ~~(IX)~~

(b) a nucleotide sequence which encodes the amino acid sequence:

(SEQ ID NO:40)

S G S S S N I G S N T V N, (X)

and

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b).

Sub B'

6. Nucleic acid according to Claim 4 or 5, which furthermore comprises a CDR2 region selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
G S H Q R P S, (SEQ ID NO:41) (XI)

(b) a nucleotide sequence which encodes the amino acid sequence:
S N N Q R P S, (SEQ ID NO:42) (XII)

and

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% with an amino acid sequence from (a) or (b).

7. Nucleic acid which encodes the heavy chain of a human antibody, or a functional derivative or a fragment thereof, and comprises a CDR3 region, selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
V R D L G Y R V L S T F T F D I, (SEQ ID NO:43) (XIII)

(b) a nucleotide sequence which encodes the amino acid sequence:
D G R S G S Y A R F D G M D V, (SEQ ID NO:44) (XIV)

(c) a nucleotide sequence which encodes the amino acid sequence:
M G S S V V A T Y N A F D I, (SEQ ID NO:45) (XV)

(d) a nucleotide sequence which encodes the amino acid sequence:
D A D G D G F S P Y Y F P Y, (SEQ ID NO:46) (XVI)

(e) a nucleotide sequence which encodes the amino acid sequence:
L R N D G W N D G F D I, (SEQ ID NO:47) ~~(XVII)~~

(f) a nucleotide sequence which encodes the amino acid sequence:
D S E T A I A A A G R F D I, (SEQ ID NO:48) ~~(XVIII)~~

(g) a nucleotide sequence which encodes the amino acid sequence:
E D G T T V P S Q P L E F, (SEQ ID NO:49) ~~(XIX)~~

(h) a nucleotide sequence which encodes the amino acid sequence:
G S G S Y L G Y Y F D Y, (SEQ ID NO:50) ~~(XX)~~

(i) a nucleotide sequence which encodes the amino acid sequence:
G L R S Y N Y G R N L D Y, (SEQ ID NO:51) ~~(XXI)~~

(j) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80% and preferably of at least 90%, with an amino acid sequence from (a), (b), (c) or (d), and

(k) a nucleotide sequence which encodes an amino acid sequence having an equivalent ability to bind to autoantibodies against GPIIb/IIIa.

8. Nucleic acid according to ~~Claim~~ 7, which furthermore comprises a ~~CDR1~~ and/or CDR2 region selected from a nucleotide sequence which encodes the amino acid sequences shown in Tab. 7a or b or an amino acid sequence which is at least 80% homologous thereto.

9. Nucleic acid which encodes the light chain of a human antibody, or a functional derivative or a fragment thereof, and comprises a CDR 3 region, selected from:

(a) a nucleotide sequence which encodes the amino acid sequence:
C S Y V H S S T N, (SEQ ID NO:52) ~~(XXII)~~

(b) a nucleotide sequence which encodes the amino acid sequence:
Q V W D N T N D Q, (SEQ ID NO:53) ~~(XXIII)~~

(c) a nucleotide sequence which encodes an amino acid sequence having an homology of at least 80%, and preferably at least 90%, with an amino acid sequence from (a), and

(d) a nucleotide sequence which encodes an amino acid sequence having an equivalent ability to bind to autoantibodies against GPIIb/IIIa.

10. Nucleic acid from Claim 9, which furthermore encompasses a CDR1 and/or CDR2 region selected from a nucleotide sequence which encodes the amino acid sequences shown in Tab. 7a or b or an amino acid sequence which is at least 80% homologous thereto.

11. Vector, characterized in that it

(a) contains at least one copy of a nucleic acid according to one of Claims 1 to 3 and/or at least one copy of a nucleic acid according to one of Claims 4 to 6 or

(b) contains at least one copy of a nucleic acid according to Claim 7 or 8 and/or at least one copy of a nucleic acid according to Claim 9 or 10.

12. Cell, characterized in that it

(a) expresses a nucleic acid according to one of Claims 1 to 3 and/or a nucleic acid according to one of Claims 4 to 6 or

(b) a nucleic acid according to Claim 7 or 8 and/or a nucleic acid according to Claim 9 or 10.

13. Polypeptide, characterized in that it

(a) is encoded by a nucleic acid according to one of Claims 1 to 3 and/or a nucleic acid according to one of Claims 4 to 8 or

(b) by a nucleic acid according to Claim 7 or 8 and/or a nucleic acid according to Claim 9 or 10.

14. Polypeptide according to Claim 13, characterized in that it comprises the variable domain of the H chain and/or the variable domain of the L chain of a human antibody.

15. Polypeptide according to Claim 14, characterized in that it comprises both the variable domain of the H chain and the variable domain of the L chain.

16. Polypeptide according to one of Claims 13 to 15, characterized in that it is coupled to a labelling group or a toxin.

17. Antibody against a polypeptide according to one of Claims 13 to 16.

18. Antibody according to Claim 17, characterized in that it is directed against the CDR3 region of the heavy and/or light antibody chain of the polypeptide.

19. Pharmaceutical composition which comprises, as the active component, a nucleic acid according to one of Claims 1 to 10, a vector according to Claim 11, a cell according to Claim 12, a polypeptide according to one of Claims 13 to 16 or an antibody according to either Claim 17 or 18, where appropriate together with other active components and pharmaceutically customary adjuvants, additives or excipients.

20. Use of a nucleic acid according to one of Claims 1 to 10, of a vector according to Claim 11, of a cell according to Claim 12, of a polypeptide according to one of Claims 13 to 16, of an antibody according to Claim 17 or 18, or of a pharmaceutical composition according to Claim 19 for preparing an agent for the diagnosis or for the treatment or prevention of AITP.

21. Use of a nucleic acid according to one of Claims 1 to 10, of a vector according to Claim 11, of a cell according to Claim 12, of a polypeptide according to one of Claims 13 to 16, or of a pharmaceutical composition according to Claim 19 for preparing an agent for exerting an effect on the binding of fibrinogen to blood platelets.

22. Use according to Claim 21 for preparing an agent for modulating blood coagulation, in particular for dissolving thrombi and/or for preventing the formation of thrombi.

23. Process for isolating phagemid clones which express nucleic acids which encode autoantibodies against GPIIb/IIIa or encode antiidiotypic antibodies which are directed against these autoantibodies, characterized in that a phagemid library is prepared from lymphocytes obtained from a human donor and the desired phagemid clones are isolated by affinity selection, comprising negative and positive selection steps.

24. Process according to Claim 23, characterized in that antibody-encoding nucleic acids are isolated from the clones.

25. Process according to Claim 23 or 24, characterized in that the antibody-encoding nucleic acids are used for expressing recombinant antibody chains, or derivatives or fragments thereof.